

#### 1 APRIL 2008

## ARAFURA RESOURCES LIMITED (ASX: ARU)

### MAJOR NEW MINERALISED ZONE DISCOVERED

### **OUTSTANDING HIGH GRADE INTERCEPTS IN RESOURCE INFILL ZONE**

# NOLANS RARE EARTHS PROJECT, NORTHERN TERRITORY (ARU 100%)

## **Highlights**

- Discovery of a new mineralised zone semi-continuous drill intercepts of significant phosphate-rare earths mineralisation returned from a new mineralised zone discovered under shallow soil cover.
- Highest grade infill drill intervals of rare earths and uranium include:

0	9 metres at	26.6% REO	and	<b>5.6 lb/T U<sub>3</sub>O<sub>8</sub></b> in NBRC182
$\circ$	3 metres at	22 5% RFO	and	4 7 lb/T U <sub>2</sub> O <sub>2</sub> in NBRC181

• Other significant infill drill intervals include:

0	12 metres at	5.9% REO	<b>1.2 lb/T <math>U_3O_8</math></b> in NBRC200
0	42 metres at	5.5% REO	<b>1.1 lb/T U<math>_3</math>O<math>_8</math></b> in NBRC199
0	13 metres at	5.1% REO	<b>0.9 lb/T <math>U_3O_8</math></b> in NBRC201
0	47 metres at	4.1% REO	$\textbf{0.7 lb/T}~\textbf{U}_{3}\textbf{O}_{8}~\text{in NBRC206}$
0	22 metres at	3.9% REO	$\textbf{0.7 lb/T} \ \textbf{U}_{3}\textbf{O}_{8} \ \text{ in NBRC190}$
0	10 metres at	3.8% REO	$\textbf{0.7 lb/T} \ \textbf{U}_{3}\textbf{O}_{8} \ \ \text{in NBRC199}$
0	13 metres at	3.5% REO	$\textbf{0.7 lb/T}~\textbf{U}_{3}\textbf{O}_{8}~\text{in NBRC200}$
0	23 metres at	3.3% REO	<b>0.7 lb/T U<sub>3</sub>O<sub>8</sub></b> in NBRC179

#### **Background**

The Nolans phosphate-hosted rare earths-uranium (REE-P-U) deposit is situated within Arafura's Substitute Exploration Licence 23671 (SEL 23671) near Aileron, about 135 kilometres NNW of Alice Springs in the Northern Territory. Exploration has been undertaken on the deposit by Arafura since it discovered the mineralisation in 1999.

The current identified resources at Nolans are estimated to be

Tonnes	rare earths	phosphate	uranium
18.6 MT	3.1% REO	14% P₂O₅	0.47 lb/T U <sub>3</sub> O <sub>8</sub>

(JORC Code compliant; 54% INDICATED, 46% INFERRED; ARU:ASX 21/11/05; Figure 1 - "2005 resource limit")

This estimate was determined mainly on the basis of inclined drill holes spaced at about 40 metre intervals on drill sections spaced 40 metres apart.

In late 2006 Arafura undertook a program of infill drilling for detailed geological interpretation and resource modelling purposes in the central portion of the North Zone of the deposit. This 400 metre long portion (Figure 1 – "Infill drill area") is expected to be the initial mining area when planned development commences in 2009/2010.

In September 2007 Arafura commenced a 20,000 metre RC percussion drilling program which encompassed:

- o completion of the infill drilling;
- o additional resource definition drilling away from the initial mining area; and
- o further exploration of the project area.

#### **New Mineralised Zone Discovered**

Since late 2007, Arafura has completed 10,481 metres of RC percussion drilling in 124 holes within and peripheral to the known mineralised system to better define the extent of mineralisation and to allow upgrade of resources in these areas to at least INDICATED status.

Three resource definition holes (NBRC363-365) drilled in recent days, and four holes drilled earlier in the program (NBRC172-173, NBRC339-340) have intersected strong phosphate-rare earth mineralisation in the centre of the South Zone (Figure 1 – "Major new intercept"), about 400 metres south of the initial mining area (see below). Each of these holes was inclined at 60° towards the SSE (145°).

Summary details of holes in the new zone in the current drilling program are as follows:

NBRC365	93 metres of mineralised intervals between 30-134 metres depth
NBRC363	78 metres of mineralised intervals between 11-108 metres depth
NBRC364	23 metres of mineralised intervals between 61-100 metres depth
NBRC339	47 metres of mineralised intervals between 2-104 metres depth
NBRC340	30 metres of mineralised intervals between 3-54 metres depth
NBRC172	42 metres of mineralised intervals between 26-90 metres depth
NBRC173	12 metres of mineralised intervals between 5-21 metres depth

Mineralised zones in NBRC365 and NBRC363 are the longest semi-continuous mineralised intercepts so far encountered at Nolans.

Previous results (ARU:ASX 03/11/05; ARU:ASX 09/10/06; ARU:ASX 23/11/06) on adjacent drill sections include:

NBRC066	27 metres of mineralised intervals between 6-186 metres depth
NBRC096	13 metres of mineralised intervals between 18-186 metres depth
NBRC110	14 metres of mineralised intervals between 27-54 metres depth
NBRC112	13 metres of mineralised intervals between 8-52 metres depth
NBRC139	22 metres of mineralised intervals between 1-72 metres depth

The mineralisation in NBRC365 extends to 120 metres below the surface. Some of the mineralisation in NBRC066 and NBRC096 is 150-160 metres below the surface. The new mineralised zone is open both laterally and at depth.

These mineralised drill intercepts have been identified using geological and radiometric logging and are *subject to confirmation by assaying*.

Experience gained over the past seven years at Nolans has consistently demonstrated that geological and radiometric logging of individual RC drill samples provides a reliable assessment of likely rare earths and uranium grades. Assay results are not expected to be available before mid-2008 due to the long lead times being experienced in laboratory turnaround.

The Company is planning additional RC and core drilling later in 2008 to further test the extent of mineralisation in this area.

The new mineralised zone is concealed by 1 to 5 metres of soil and alluvial cover. The discovery of mineralisation under cover is important as it opens up other areas covered with shallow soil and alluvial material to exploration and possible discovery of additional mineralisation.

#### **Infill Drilling Program**

The infill drilling program was designed to reduce the hole spacing to 20 metres on drill sections 20 metres apart in the central portion of the North Zone (Figure 1 – "Infill drill area"), with the aim of upgrading the resources in the initial mining area to MEASURED status to a depth of 100 metres below the surface. This should enable completion of pit design and lead to an estimation of Ore Reserves as the basis for the Definitive (Bankable) Feasibility Study (DFS) planned throughout 2008 and 2009.

Results from the initial phase of this work were reported to the ASX in July 2007 (ARU:ASX 09/07/07). The subsequent phase, comprising 5,550 metres in 55 RC percussion holes, was completed during September-December 2007. The first assay results for this phase have recently been received. Results for all mineralised intervals are listed in Table 1 based on a 1% REE cut-off grade in the assay samples with limited internal dilution in the intercepts. The locations of the RC holes for which results are being reported are highlighted in Figure 1 ("New assay").

Sample intervals were selected on the bases of geological and radiometric logging of individual 1 metre RC drill samples. Assay sample intervals range from 1 metre to 2 metres. Samples were prepared and analysed using the same procedures and analytical techniques (3-acid digest, ICP-OES/MS) that were used in all previous programs. As expected, intervals of high grade massive fluorapatite (calcium fluoro-phosphate) mineralisation were defined in all infill holes for which results have been received. Intervals of significant grade and width include:

Drill hole#	interval	rare earths	phosphate	uranium
NBRC206	47m at	4.1% REO	19.2% P <sub>2</sub> O <sub>5</sub>	$0.7 \text{ lb/T } \text{U}_3\text{O}_8 \text{ from } 109\text{m}$
NBRC200	12m at	5.9% REO	27.1% P <sub>2</sub> O <sub>5</sub>	1.2 lb/T U <sub>3</sub> O <sub>8</sub> from 95m
and	13m at	3.5% REO	15.3% P <sub>2</sub> O <sub>5</sub>	$0.7 \text{ lb/T } \text{U}_3\text{O}_8 \text{ from 60m}$
NBRC199	10m at	3.8% REO	17.6% P <sub>2</sub> O <sub>5</sub>	0.7 lb/T U <sub>3</sub> O <sub>8</sub> from 8m
and	42m at	5.5% REO	14.1% P <sub>2</sub> O <sub>5</sub>	1.1 lb/T U <sub>3</sub> O <sub>8</sub> from 20m
NBRC201	13m at	5.1% REO	17.6% P <sub>2</sub> O <sub>5</sub>	0.9 lb/T U <sub>3</sub> O <sub>8</sub> from 3m
and	19m at	3.2% REO	14.7% P <sub>2</sub> O <sub>5</sub>	$0.5 \text{ lb/T } \text{U}_3\text{O}_8 \text{ from 20m}$
NBRC190	22m at	3.9% REO	17.2% P <sub>2</sub> O <sub>5</sub>	0.7 lb/T U <sub>3</sub> O <sub>8</sub> from 19m
NBRC179	23m at	3.3% REO	13.4% P <sub>2</sub> O <sub>5</sub>	$0.7 \text{ lb/T } \text{U}_3\text{O}_8  \text{from 20m}$
and	30m at	3.2% REO	13.9% P <sub>2</sub> O <sub>5</sub>	$0.6 \text{ lb/T } \text{U}_3\text{O}_8 \text{ from } 62\text{m}$

Significant intervals of very high grade rare earths mineralisation (as cheralite, a relatively high REE and low P phosphate mineral) were encountered in NBRC182, NBRC181 and NBRC199:

NBRC182 which includes:	39m at 9.7% REO,		10.2% P <sub>2</sub> O <sub>5</sub>	$2.0 \text{ lb/T } U_3O_8 \text{ from 4m}$		
willon includes.	9m at	26.6% REO	19.0% P <sub>2</sub> O <sub>5</sub>	5.6 lb/T $U_3O_8$ from 29m		
NBRC181 which includes:	8m at	9.8% REO,	8.7% P <sub>2</sub> O <sub>5</sub>	2.1 lb/T $U_3O_8$ from 1m		
willen includes.	3m at	22.5% REO	15.5% P <sub>2</sub> O <sub>5</sub>	4.7 lb/T U <sub>3</sub> O <sub>8</sub> from 1m		

Assays for the remainder of the infill drilling are expected to be received over the next 6-8 weeks and will be reported in due course.

### **Heavy Media Separation**

Arafura recently reported outstanding results from its Heavy Media Separation (HMS) demonstration exercise (ARU:ASX 25/03/08). This concentrated product is currently at ANSTO for processing at the chemical demonstration plant.

The HMS demonstration, that has yet to be optimised, indicates that the process is capable of producing a higher grade rare earths product of 5.8% REO and 25% to 30%  $P_2O_5$ . In addition to reducing transportation costs the HMS process will enable Arafura to control processing plant grade at the mine site for a minimal cost. This is likely to provide a reduction in some downstream operating costs and potentially capital cost reductions. Further test work is aimed at optimising the process to produce a high-grade product.

#### Arafura Resources

Arafura Resources is a Perth-based specialty metals explorer and developing producer which has operated in the Northern Territory for the past 20 years. It listed on the Australian Stock Exchange in 2003 and has diversified its asset portfolio by targeting projects that will deliver long-term and sustainable value and growth. These include:

Gold Mt Porter deposit near Pine Creek ARU 100%

Gold Kurinelli gold project ARU 100%

Nickel A farm-in by Mithril Resources at Hammer Hill
 Vanadium Jervois magnetite-vanadium project ARU 100%

### For more information:

Fact sheets on Arafura can be found on the Arafura Resources website at <a href="https://www.arafuraresources.com.au">www.arafuraresources.com.au</a>

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The information in this press release that relates to drilling, geological interpretation and mineral resources has been compiled by Mr John Goulevitch, BSc(Hons), MSc, of Exploremin Pty Ltd. Mr Goulevitch is a Fellow of the Australian Institute of Geoscientists and he has the necessary professional qualifications and sufficient experience relevant to this style of mineralisation to qualify as the Competent Person as defined in the *Australasian Code for Reporting of Mineral Resources and Ore Reserves* (JORC Code) for reporting these exploration results. Mr Goulevitch acts as Consulting Geologist to Arafura Resources Limited. He consents to the inclusion in this report of the contained technical information in the form and context in which it appears. An entity associated with Mr Goulevitch is a shareholder in Arafura Resources.

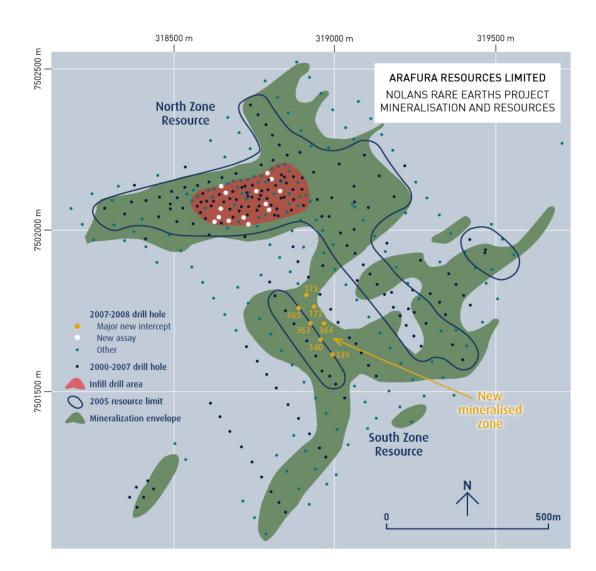


Figure 1: Location of infill drilling zone and new discovery area, Nolans Project

Table 1: 2007-2008 RC Drill Hole Results, Nolans Project

HOLENO	EAST metres	NORTH metres	RL metres	INCLN	AZIM	EOH metres	FROM metres	TO metres	INTVL metres	TOTAL REO**	P <sub>2</sub> 0 <sub>5</sub> **	U <sub>3</sub> O <sub>8</sub> ** Ib/T ***
NBRC179	318831.3	7502126.0	656.9	-60	145	96	0.0	11.0	11.0	4.75	20.08	1.00
							13.0	19.0	6.0	4.12	18.21	0.95
							20.0	41.0	23.0	3.29	13.44	0.68
							62.0	92.0	30.0	3.16	13.94	0.59
							47.0	53.0	6.0	4.82	19.47	0.96
								TOTAL	76.0	3.64	15.45	0.74
NBRC180	318804.9	7502163.0	656.8	-60	145	150	57.0	76.0	19.0	1.68	10.16	0.51
							78.0	92.0	14.0	3.06	14.45	0.56
							103.0	116.0	13.0	3.89	20.99	0.93
							127.0	144.0	17.0	2.55	12.53	0.49
								TOTAL	63.0	2.68	13.99	0.60
NBRC181	318733.8	7502023.1	657.4	-60	145	36	1.0	9.0	8.0	9.84	8.66	2.05
							15.0	18.0	3.0	2.82	13.67	0.53
							20.0	21.0	1.0	1.50	7.45	0.23
								TOTAL	12.0	7.39	9.81	1.52
NBRC182	318719.4	7502043.6	657.4	-60	145	60	4.0	44.0	39.0	9.67	10.16	1.96
								TOTAL	39.0	9.7	10.2	2.0
NBRC190	318799.1	7502067.9	657.2	-60	145	48	19.0	41.0	22.0	3.90	17.17	0.72
								TOTAL	22.0	3.9	17.2	0.7
NBRC199	318786.3	7502086.0	657.1	-60	145	66	2.0	6.0	4.0	4.91	21.71	0.86
	0.07.00.0	1002000.0	007.1		0	00	8.0	18.0	10.0	3.76	17.62	0.67
							20.0	62.0	42.0	5.53	14.07	1.10
								TOTAL	56.0	5.17	15.25	1.00
NBRC200	318758.4	7502125.5	657.1	-60	145	120	6.0	8.0	2.0	3.07	12.72	0.45
							14.0	16.0	2.0	1.42	6.64	0.19
							60.0	73.0	13.0	3.50	15.28	0.68
							79.0	83.0	4.0	4.04	20.33	0.81
							91.0	93.0	2.0	3.05	13.98	0.61
							95.0	107.0	12.0	5.88	27.07	1.18
								TOTAL	35.0	4.21	19.19	0.82
NBRC201	318642.2	7502044.8	655.9	-60	145	78	3.0	16.0	13.0	5.07	17.61	0.92
							20.0	39.0	19.0	3.16	14.72	0.51
								TOTAL	32.0	3.94	15.89	0.68
NBRC202	318629.6	7502031.4	656.4	-60	145	72	0.0	10.0	10.0	2.37	9.48	0.37
								TOTAL	10.0	2.4	9.5	0.4
NBRC203	318673.7	7502034.5	656.9	-60	145	30	8.0	10.0	2.0	4.05	5.84	0.58

HOLENO	EAST metres	NORTH metres	RL metres	INCLN	AZIM	EOH metres	FROM metres	TO metres	INTVL metres	TOTAL REO**	P <sub>2</sub> 0 <sub>5</sub> **	U <sub>3</sub> O <sub>8</sub> ** Ib/T ***
NBRC204	318648.4	7502070.9	656.3	-60	145	78	7.0	9.0	2.0	2.63	11.00	0.50
							11.0	13.0	2.0	1.88	8.59	0.32
							17.0	19.0	2.0	3.24	12.37	0.45
							39.0	55.0	16.0	2.38	10.20	0.46
							58.0	72.0	14.0	3.99	19.42	0.84
								TOTAL	36.0	3.04	13.86	0.60
NBRC205	318664.2	7502121.1	656.4	-60	145	144	32.0	34.0	2.0	7.02	29.10	1.28
							45.0	46.0	1.0	1.96	8.93	0.38
							48.0	49.0	1.0	2.73	11.11	0.49
							54.0	56.0	2.0	2.77	11.57	0.47
							82.0	86.0	4.0	4.19	18.56	0.68
							96.0	106.0	10.0	4.95	23.07	0.85
							110.0	126.0	16.0	2.59	12.94	0.48
							128.0	139.0	11.0	2.76	13.57	0.51
								TOTAL	47.0	3.45	16.23	0.61
NBRC206	318650.0	7502141.0	656.2	-60	145	156	20.0	22.0	2.0	2.50	9.28	0.36
							23.0	26.0	3.0	2.47	11.11	0.34
							28.0	29.0	1.0	2.12	9.97	0.28
							63.0	66.0	3.0	7.05	27.57	1.43
							88.0	91.0	3.0	3.68	15.73	0.45
							109.0	156.0	47.0	4.11	19.21	0.67
								TOTAL	59.0	4.06	18.55	0.66
NBRC210	318792.0	7502181.1	656.9	-60	145	168	9.0	17.0	8.0	3.51	15.01	0.46
							24.0	25.0	1.0	6.87	29.32	0.86
							27.0	29.0	2.0	4.42	18.79	0.55
							80.0	107.0	27.0	3.49	14.33	0.62
							113.0	124.0	11.0	4.23	19.94	0.81
							126.0	144.0	18.0	3.46	16.18	0.62
							150.0	151.0	1.0	3.72	16.04	0.59
								TOTAL	68.0	3.69	16.18	0.63

<sup>\*\*</sup> Analytical data subject to confirmation by duplicate sampling and inter-laboratory analyses. 
\*\*\* 1 lb/T  $U_3O_8$  equals 0.0454%  $U_3O_8$